

REMARKS**I. Introduction**

In response to the Office Action dated October 29, 2003, claims 38 and 39 have been amended. Claims 31, 34 and 36-50 are pending. Claims 34, 36-45 and 47-50 have been withdrawn by the Examiner as directed to a non-elected invention. Claims 31 and 46 are currently pending and being examined. Reconsideration of the application, as amended, is requested.

II. Claim Amendments

Applicants' attorney amended claims 38 and 39 as indicated above to delete reference to SEQ ID NO: 13. This amendment is made solely for the purpose of correcting an inadvertent typographical error, as SEQ ID NO: 13 is 50 nucleotides in length and claims 38 and 39 limit the length of the nucleotide to 20-30 nucleotides. Entry of this amendment is respectfully requested.

III. Examiner Interview Summary

Record is made of a telephone interview on November 6, 2003, between Applicants' undersigned attorney and Examiner Lewis in connection with the present patent application.

The discussion centered on two points: the omission of "synthetic" from the consideration of the technical feature linking the claimed subject matter for purposes of unity of invention, and omission of "phosphorothioate" from the features considered in the prior art rejections. It is the understanding of Applicants' undersigned attorney that the Examiner does not consider the limitation of the claimed subject matter to synthetic oligonucleotides having a 5mCpG wherein the 5mC is C-5 methylcytosine to be a structural feature of the invention. It is also the understanding of Applicants' undersigned attorney that the Examiner will reconsider the prior art rejections in view of the limitation to synthetic oligonucleotides comprising a phosphorothioate nucleotide, as recited in claim 31.

IV. Restriction Requirement

In paragraphs (1)-(2) of the Office Action, the restriction requirement was made final

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Applicants acknowledge the finality of the requirement, but maintain each of the arguments raised at pages 1-4 of the prior response. In particular, Applicants note that the Volpe reference cited at page 2 of the Office Action does not in fact destroy the novelty or inventive step of the claimed subject matter.

Applicants disagree with the Examiner's assertion that there is no technical (or structural) difference between a synthetic oligonucleotide and the dinucleotides described in Volpe. Those skilled in the art readily appreciate the technical distinction between a synthetic oligonucleotide and naturally occurring nucleic acids as described in Volpe. Moreover, Volpe provides no teaching or motivation to prepare synthetic oligonucleotides having the features of Applicants' claimed subject matter.

Applicants urge the Examiner to reconsider the restriction requirement and rejoin the withdrawn claims.

V. Prior Art Rejections

In paragraphs (3)-(4) of the Office Action, claim 31 was rejected under 35 U.S.C. §102 as allegedly anticipated by Flynn et al., Biochemistry 1996, Vol. 35, pages 7308-7315 (Flynn). In paragraphs (5)-(6) of the Office Action, claim 46 was rejected under 35 U.S.C. §103(a) as being obvious in view of Flynn.

Applicants respectfully traverse these rejections.

Both claims 31 and 46 recite a synthetic oligonucleotide of at least 26 nucleotides in length and comprising a 5mCpG dinucleotide, wherein the 5mC is a C-5 methylcytosine, and wherein the synthetic oligonucleotide comprises a phosphorothioate nucleotide.

The cited references do not teach or suggest a synthetic oligonucleotide that comprises a phosphorothioate nucleotide. No motivation is provided in the art to modify the synthetic oligonucleotides of Flynn 1996 to arrive at the claimed subject matter.

Thus, Applicants submit that claims 31 and 46 are allowable over Flynn, and withdrawal of the rejections based on the prior art is respectfully requested.

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VI. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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